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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/539,739

06/19/2006

Joel Choisnet

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EXAMINER

RALIS, STEPHEN J

ART UNIT

PAPER NUMBER

3742

MAIL DATE

DELIVERY MODE

12/11/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/539,739

Applicant(s)

CHOISNET, JOEL

Examiner

Stephen J. Ralis

Art Unit

3742

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 June 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____  |

Continuation of Attachment(s) 3). Information Disclosure Statement(s) (PTO/SB/08), Paper No(s)/Mail Date :6/20/2005, 8/21/2006 and 9/11/2006.

## **DETAILED ACTION**

### ***Priority***

1. Applicant's claim for foreign priority benefit of French Application No. 02/16364, filed 20 December 2002, is acknowledge.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

The claim of benefit to International Application No. PCT/EP03/51036 states an incorrect filing date of "17 December 2002" on page 2 of the Declaration when the correct filing date should be -17 December 2003-. Appropriate correction is required.

### ***Specification***

3. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The

abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

In the instant case, the abstract contains phrases "comprises" and "comprises means for". These phrases are deemed patent claim phraseology and should be amended. Appropriate correction is required.

### ***Drawings***

4. The drawings are objected to because Figure 3 discloses multiple wire traces/tracks that are intersecting which should disclose a "step over" non-intersecting traces/tracks instead since it is a well known and excepted practice for such electrical drawings to disclose traces/tracks as such when non-intersecting. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each

drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112***

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-10 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the control means" in line 6. It is unclear if the recitation to "the control means" refers to the "means for controlling the electronic switch" or the "means for controlling the switching time of the electronic switch". Further clarification is required to delineate the "control means". In addition, further delineation is required for claims 2 and 4-10 due to the recitation of "the control means".

Claim 1 recites the limitation "the voltage" in line 6-7. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the terminals" in line 7. There is insufficient antecedent basis for this limitation in the claim.

Claim 2 recites the limitation "the temperature" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the voltage" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 3 recites the limitation "the common point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 4 recites the limitation "the normal switching time" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the common point" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the setpoint voltage" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the output" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the setpoint voltage" in lines 5-6. There is insufficient antecedent basis for this limitation in the claim.

Claim 5 recites the limitation "the turning-on and turning-off" in line 5. There is insufficient antecedent basis for this limitation in the claim.

Claims 6 and 7 recite the limitation "the normal switching time" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 8 and 10 recite the limitation "the common point" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claims 8-10 recite the limitation "the setpoint voltage" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 8-10 recite the limitation "the output" in line 4. There is insufficient antecedent basis for this limitation in the claim.

Claim 10 recites the limitation "the turning-on and turning-off" in line 4. There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 1-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Hancock et al. (U.S. Patent No. 5,847,367).

Hancock et al. disclose a device for regulating the temperature of a heating wire (see Figure 1), the device comprising: an electronic switch (switching means 2; column 3, lines 59-62) connected in series with the heating wire (heating element 3) (see Figure



1), means for controlling the electronic switch (switching means 2) (column 3, line 55 – column 7, line 32; see Figure 1), wherein the device also comprises means for controlling a switching time (column 6, line 13 – column 7, line 32; see Figure 1) of the electronic switch (switching means 2) and in that the control means (see Figure 1) control the voltage across the terminals of the switch (switching means 2) as a function of a setpoint voltage (scaling circuit 8 comprising resistor 8a and variable resistor 8b) defining the switching time (Abstract; control circuit 10; column 3, line 55 – column 7, line 32; see Figure 1).

With respect to the limitations of claim 2, Hancock et al. disclose means (comparator 9) for measuring the temperature of the heating wire (Abstract), wherein the control means turn the electronic switch (switching means 2) on and off as a function of the temperature of the heating wire (heating element 3) (Abstract; column 3, line 55 – column 7, line 32; see Figure 1).

With respect to the limitations of claim 3, Hancock et al. disclose the means for measuring the temperature of the heating wire (heating element 3) comprise means for (comparator 9) comparing the voltage present at the common point between the electronic switch (switching means 2) and the heating wire (heating element 3) with a reference voltage (input from scaling circuit 8 comprising resistor 8a and variable resistor 8b) (Abstract).

With respect to the limitation of the voltage present at the common point between the electronic switch and the heating wire, Hancock et al. disclose a series circuit loop comprising a switching means (2), current sensor (7), resistor (8a), variable resistor (8b)

and heating element (3) with a common point designated between electronic switch (switching means 2) and the heating element (3) via the series loop with the current sensor (7), resistor (8a), variable resistor (8b) also between the electronic switch (switching means 2) and the heating element (3). Therefore, Hancock et al. fully meets "the voltage present at the common point between the electronic switch and the heating wire" given its broadest reasonable interpretation.

With respect to the limitations of claims 4, 6 and 7, Hancock et al. disclose the output of latch (17) being connected to the input (10a) of the switch control circuit (10) which is connected to the switch (2). Hancock et al. further disclose when the latch (17) is in an "ON" state the switch (2) consequently is "ON" and current flows through the heating element (3) (column 6, line 30 -column 7, line 32). The switch (2) would have a shorter frequency switching time when taken in isolation compared to that of the logic truth table disclosed in column 6, lines 40-45. Therefore, Hancock et al. fully meets "the control means define a switching time that is longer than the normal switching time of the electronic switch taken in isolation" given its broadest reasonable interpretation.

With respect to the limitations of claim 5 and 8-10, Hancock et al. disclose the control means (see Figure 1) comprising an operational amplifier (comparator 9) having a first input (12) being connected to the common point (between switch 2 and current sensor 7) of the heating wire (heating element 3) and of the electronic switch (switching means 2), and in addition, a second input (11) receiving the setpoint voltage (scaling circuit 8 comprising resistor 8a and variable resistor 8b) with the output (13) controlling, in part, the turning-on and the turning-off of the electronic switch (switching means 2).

Therefore, Hancock et al. fully meets "the control means comprise an operational amplifier, whereof a first input is connected to the common point of the heating wire and of the electronic switch, whereof a second input receives the setpoint voltage and whereof the output controls the turning-on and the turning-off of the electronic switch" given its broadest reasonable interpretation.

9. Claims 1, 4, 5 and 10 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Prager (U.S. Publication No. 2002/0130123).

Prager discloses a device for regulating the temperature of a heating wire (Title), the device comprising: an electronic switch (internal power switch 6/thermostatic switch 7) connected in series with the heating wire (heating element 10) (see Figure 2), means for controlling the electronic switch (electronic assembly 1'; see Figure 2), wherein the device also comprises means for controlling a switching time (control unit 40) (page 3, paragraph 3; page 3, paragraph 33) of the electronic switch (internal power switch 6/thermostatic switch 7) and in that the control means (control unit 40) controls the voltage across the terminals of the switch (internal power switch 6/thermostatic switch 7) as a function of a setpoint voltage defining the switching time (Abstract).

With respect to the limitations of claim 4, Prager discloses the control means (control unit 40) defining a switching time that is longer than the normal switching time of the electronic switch (internal power switch 6) taken in isolation (delay times; page 3, paragraphs 33-34). The switch (internal power switch 6) would have a shorter frequency switching time when taken in isolation compared to that of the delay times disclosed by

Prager. Therefore, Prager fully meets "the control means define a switching time that is longer than the normal switching time of the electronic switch taken in isolation" given its broadest reasonable interpretation.

With respect to the limitation of claims 5 and 10, Prager discloses the amplifier (50) may be a comparator (page 3, paragraph 35) and furthermore the device including means for supplying a voltage drop arising at the measuring resistance as an input signal to the control nit (40) for evaluation of the input signal (Abstract). Prager disclose a amplifier (50) being utilized as a comparator with an output being the voltage drop when the heating element is in use. The voltage drop would have to be the difference between a reference voltage and the voltage being current used by the heating element in order for a comparator to produce such an output signal. Therefore, Prager fully meets "the control means comprise an operational amplifier, whereof a first input is connected to the common point of the heating wire and of the electronic switch, whereof a second input receives the setpoint voltage and whereof the output controls the turning-on and the turning-off of the electronic switch" given its broadest reasonable interpretation.

### ***Claim Rejections - 35 USC § 103***

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

12. Claims 2, 3 and 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Prager (U.S. Publication No. 2002/0130123).

13. Prager discloses all of the limitations of the claimed invention, as previously set forth, except for means for measuring the temperature of the heating wire, wherein the control means turn the electronic switch on and off as a function of the temperature of the heating wire; and the means for measuring the temperature of the heating wire comprising means for comparing the voltage present at the common point between the electronic switch and the heating wire with a reference voltage.

Prager teaches the control unit (40) has the function of signaling the current flow through the heating element (10). However, Prager further teaches the control unit (40) can also, *alternatively, or in addition to, indicate any present heating conditions and/or other present conditions which are derivable from the simple event whether or not a current flow is detected at all and/or derivable from the value of the current sensed by the voltage drop and/or derivable from the duration of periods of current flow and non-current flow* (page 3, paragraph 31-32). Prager further teach temperature setting

switches such as thermostatic switch (7) may be self-resetting temperature switches and may be in series or in parallel with the internal power switch (6) (page 4, paragraph 41). To provide a means for measuring the temperature of the heating wire, wherein the control means turn the electronic switch on and off as a function of the temperature of the heating wire would have been a mere engineering expediency as Prager clearly teaches the ability to determine present heating conditions by the sensed voltage drop as well as the use of thermostatic switches in use being under the same control means.

With respect to claims 6-9, see rejections of claims 4, 5 and 10 above over Prager.

#### ***Prior Art***

14: The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6,633,156 to Choynet is a teaching of a monitoring a load current in an device.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen J. Ralis whose telephone number is 571-272-6227. The examiner can normally be reached on Monday - Friday, 8:00-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tu Hoang can be reached on 571-272-4780. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in black ink, appearing to read 'SJR', with a long horizontal line extending to the right.

Stephen J Ralis  
Examiner  
Art Unit 3742

SJR  
December 5, 2007